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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,318	02/20/2004	Shin-ichi Yamada	YAMAP0901US	2150

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EXAMINER	
BIBBINS, LATANYA	
ART UNIT	**PAPER NUMBER**
2627	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/21/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/784,318	YAMADA ET AL.	
	Examiner	Art Unit	
	LaTanya Bibbins	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) *4-9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of the species corresponding to Figure 1, in the reply via telephone on November 27, 2006, is acknowledged. Election was made **without traverse** via telephone on November 27, 2006. It is noted that applicant asserts that claim 1 is generic. Claims 4-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohno et al. (US Patent No. 5,828,634).

Regarding claim 1, Ohno teaches a tracking error signal generation device, comprising: a splitting and convergence section for splitting an optical beam into a main beam and a sub beam and converging the main beam and the sub beam onto an optical disc (see the diffraction grating and objective lens elements 3 and 5 respectively in Figure 7A); a two-portion main beam detection section for detecting the main beam reflected by the optical disc (see Figure 10 element 8); a main beam push-pull signal generation section for generating a main beam push-pull signal based on a differential signal which is output from the two-portion main beam detection section (see Figure 10 element 12); a two-portion sub beam detection section for detecting the sub beam reflected by the optical disc (see Figure 10 elements 9 or 10); a sub beam push-pull signal generation section for generating a sub beam push-pull signal based on a differential signal which is output from the two-portion sub beam detection section (see Figure 10 elements 14 or 15); a displacement amount detection section for detecting a displacement amount of the main beam push-pull signal from a reference value based on the main beam push-pull signal and the sub beam push-pull signal (see Figure 10 element 26); and a tracking error signal generation section for generating a tracking error signal by correcting either the main beam push-pull signal or the sub beam push-pull signal based on the displacement amount detected by the displacement amount detection section (see Figure 10 element 18).

Regarding claim 2, Ohno teaches a tracking error signal generation device according to claim 1, wherein the displacement amount detection section adds the main beam push-pull signal and the sub beam push-pull signal and detects the addition result

as a displacement amount of the main beam push-pull signal from the reference value (see Figure 10 element 26).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno et al. (US Patent No. 5,828,634) as applied to claim 1 above, and further in view of Deguchi et al. (US Patent No. 4,787,076).

Regarding claim 3, Ohno teaches a tracking error signal generation device according to claim 1, but fails to teach that the tracking error signal generation section generates a tracking error signal by correcting the main beam push-pull signal based on a low frequency component of a signal representing the displacement amount detected by the displacement amount detection section.

Deguchi, however, teaches a tracking error signal device wherein the tracking error signal generation section generates a tracking error signal by correcting the main beam push-pull signal based on a low frequency component of a signal representing the displacement amount detected by the displacement amount detection section (see Figure 2 and the low pass filter in Figure 9 element 109 where the main beam push pull

signal is represented by T_{EO} and the low frequency component of the displacement amount signal is represented by the signal S').

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Deguchi with that of Ohno. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to produce a tracking error signal that can be "automatically corrected even though an offset may occur in the push-pull signal" and accomplish stable tracking (see Deguchi column 7 lines 27-31).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571) 270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LaTanya Bibbins
Patent Examiner

WAYNE YOUNG
SUPERVISORY PATENT EXAMINER